

HYDRAULIC MULTIPHASE PUMP

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation-in-part of co-pending U.S. Patent Application Serial No. 10/036,737, filed on December 21, 2001, entitled "Hydraulic Multiphase Pump," which patent application is herein incorporated by reference. *Now Patent + nb. 6,592,334*

BACKGROUND OF THE INVENTION

Field of the Invention

[0002] The present invention generally relates to an apparatus and method used to transport hydrocarbons from a wellbore to another location. More particularly, the invention relates to a multiphase pump for transporting hydrocarbons from the surface of a producing well. More particularly still, the invention relates to a pump having two vertically disposed plungers and circuitry providing more efficient operation of the pump.

Description of the Related Art

[0003] Oil and gas wells include a wellbore formed in the earth to access hydrocarbon bearing formations. Typically, a borehole is initially formed and thereafter the borehole is lined with steel pipe, or casing in order to prevent cave in and facilitate the isolation of portions of the wellbore. To complete the well, at least one area of the wellbore casing is perforated to form a fluid path for the hydrocarbons that either flow upwards to the surface of the well due to naturally occurring formation pressure or are urged upwards with some form of artificial lift. Regardless of the manner in which the hydrocarbons reach the surface of the well, this flow will arrive as a mixture of oil, gas, dirt and sand which is referred to as a "wellstream" or "fluidstream". The fluidstream is then transported by a flowline to a predetermined location, such as a separator where it may be separated into gas, liquids, and solids. If the fluidstream cannot flow to the separator, it may be pumped by a multiphase pump. These pumps must be capable of moving volumes of the oil,